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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/551,069  | 09/27/2005  | Peter David Ransome  | NEXG-01004US0       | 6314             |
| 28554   | 7590        | 11/15/2007           | EXAMINER            |                  |
| VIERRA MAGEN MARCUS & DENIRO LLP<br>575 MARKET STREET SUITE 2500<br>SAN FRANCISCO, CA 94105 |             |                      | CHENG, ICHIEH       |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 4183  |             |                      |                     |                  |
| MAIL DATE   |             | DELIVERY MODE        |                     |                  |
| 11/15/2007  |             | PAPER                |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|------------------------------|------------------------|---------------------|--|
|                              | 10/551,069             | RANSOME ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Ichieh Cheng           | 4183                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

WHENEVER IS ELECTRONIC, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 09/27/2005.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-5 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-5 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 27 September 2007 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: Wireless Interface Controller utilizing Diversity Techniques in Contiguous Regions Served by Respective Cell Sites Interconnected by a Local Area Network.

### ***Drawings***

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Tiedemann, JR (US 2001/0030948).

As to claim 1 and 4, Tiedemann discloses a communication network (Fig 1) that comprises two or more cell sites with wireless terminals (Fig 1 label 12, 14, 16, 17 and 19), multiple antennas in at least one of cell sites ([0074]), an interface controller (Fig 1 System Controller 10) located at the central site with possible of wireless, optical fiber or wired communication to some of cell sites, and a switch system connected to the cell sites (Fig 1 and [0040]). Since each controller is capable of having wireless communication, inherently each controller includes transceivers that transmit and receive RF signals according to respective protocols. (Fig 1 and [0040])

As to claim 2, Tiedemann discloses a cell selector in the central site (Fig 1 System Controller 10) that uses diversity techniques ([0066]) to select cell sites.

As to claim 5, Tiedemann discloses the central site is connected to at least some of the cell sites via optical fibres ([0040]).

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, JR (US 2001/0030948) as applied to claim 1 above, and further in view of Paulraj et al. (US 6067290) and Toshimitsu et al. (US 7006465).

8. Tiedemann discloses the claimed invention above, but fails to disclose an antenna selector in each controller that uses a diversity technique to select an antenna within each cell site having multiple receive antennas.

However, Toshimitsu et al. disclose an antenna selector in a controller (radio base station controller, column 27, lines 43-63) to simplify a control of a hand-over process and improve a communication system and a radio communication method (column 2, lines 21-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to use an antenna selector, taught by Toshimitsu et al, in Tiedemann in order to improve a communication system and a radio communication method.

Nevertheless, Toshimitsu et al. do not teach an antenna selector utilizing diversity technique.

However, Paulraj et al., disclose an antenna selector utilizing diversity technique to improve the quality of transmission (Fig 3; column 12, lines 52-67; column 13, lines 1-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to include an antenna selector utilizing diversity technique as taught by Paulraj et al. in both Tiedemann and Toshimitsu in order to improve the quality of transmission.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ichieh Cheng whose telephone number is 571-270-1941. The examiner can normally be reached on Monday to Thursday 7:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on 571-272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner Ichieh Cheng  
AU 4183

IC

Ichieh Cheng  
11/13/07

Supervisory   
LEN TRAN  
PRIMARY EXAMINER  
11/13/07